



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,420	07/25/2003	Joel D. Stolfus	P03,0220 (H0005402)	2351
128	7590	08/14/2006	EXAMINER	
HONEYWELL INTERNATIONAL INC. 101 COLUMBIA ROAD P O BOX 2245 MORRISTOWN, NJ 07962-2245				SCHINDLER, DAVID M
		ART UNIT		PAPER NUMBER
		2862		

DATE MAILED: 08/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Advisory Action</b> <b>Before the Filing of an Appeal Brief</b>	Application No. 10/627,420	Applicant(s) STOLFUS ET AL.
	Examiner David Schindler	Art Unit 2862

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 10 July 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1.  The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
  - a)  The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.
  - b)  The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### NOTICE OF APPEAL

2.  The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

#### AMENDMENTS

3.  The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
  - (a)  They raise new issues that would require further consideration and/or search (see NOTE below);
  - (b)  They raise the issue of new matter (see NOTE below);
  - (c)  They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d)  They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4.  The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5.  Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
6.  Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7.  For purposes of appeal, the proposed amendment(s): a)  will not be entered, or b)  will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

Claim(s) objected to: \_\_\_\_\_.

Claim(s) rejected: \_\_\_\_\_.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

#### AFFIDAVIT OR OTHER EVIDENCE

8.  The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9.  The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10.  The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

#### REQUEST FOR RECONSIDERATION/OTHER

11.  The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.
12.  Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). \_\_\_\_\_
13.  Other: \_\_\_\_\_.



MICHAEL CYMAN, PH.D.  
PRIMARY EXAMINER

Continuation of 11. does NOT place the application in condition for allowance because:

With regard to Applicant's arguments in the last paragraph of page 3 and the first four paragraphs of page 4, as well as paragraphs 1-3 on page 5 of the Remarks, the Examiner respectfully disagrees.

1. The Examiner notes the last paragraph of page 7 of Behrens, as well as lines 1-5 of page 8 of Behrens, as well as Figures 1 and 3. Specifically, it is noted that Behrens states that the compressor blade moving in a direction of rotation  $\theta$  has a velocity component  $v$  at a right angle to the magnetic field  $B$ . Behrens further states that due to the Lorentz force  $F = qv \times B$ , an induction current  $I$  is induced in the top side of 13, and that this induction current  $I$ , for its part, produced a secondary magnetic field, that counteracts the magnetic field  $B$  of the rod magnet 9 and induces an induction current  $U_{ind}$  in the induction coil 10. With regard to this, the Examiner notes that the coil must be within range of the secondary magnetic field that counteracts the magnetic field  $B$  of the magnet in order for the secondary magnetic field to induce an induction current  $U_{ind}$  in the coil. Therefore, in the combination of Behrens in view of Nath, in which the coil is replaced with a giant magnetoresistor (gmr), the gmr must also be within range of the secondary magnetic field that counteracts the magnetic field  $B$  of the magnet, in which the secondary magnetic field induces a signal in the gmr. By interchanging the coil with a gmr, the gmr would be used to detect the secondary magnetic field. Since the secondary magnetic field "counteracts" the magnetic field  $B$ , the secondary magnetic field must be parallel to but in the opposite direction of the magnetic field  $B$ , or at least have a vector component that is parallel to but in the opposite direction of the magnetic field  $B$ . Therefore, if the gmr is positioned to detect the secondary magnetic field, it must be detecting all of or at least a component of the secondary magnetic field that is parallel to the magnetic field  $B$ . Thus, the gmr must be biased by the magnet as the gmr must be positioned so that it is sensitive to a magnetic field along an axis that is parallel to both the magnetic field  $B$ , and the secondary magnetic field.

With regard to the arguments on page 6 and lines 1-7 of page 7 of the Remarks, the Examiner respectfully disagrees. The Examiner notes that the Nath reference was provided merely to demonstrate that a gmr and a coil are art recognized equivalents with regard to the magnetic field generated by eddy currents (see column 4, lines 12-18 of Nath). It would have been obvious to a person of ordinary skill in the art to interchange the coil with the gmr as they are both art recognized equivalents, and it would have been obvious to interchange the coil with the gmr in order to detect the secondary magnetic fields generated by eddy currents. The Examiner notes MPEP 2144.06 Art Recognized Equivalence for the Same Purpose. Section II entitled SUBSTITUTING EQUIVALENTS KNOWN FOR THE SAME PURPOSE states that in order to rely on equivalence as a rationale supporting an obviousness rejection, the equivalency must be recognized in the prior art, and cannot be based on applicant's disclosure or the mere fact that the components at issue are functional or mechanical equivalents. The Examiner notes that the Nath reference appears to establish that the above equivalency is recognized in the prior art by stating that a magnetic field sensor detects the secondary magnetic fields generated by eddy currents, and that exemplary magnetic field sensors include a sense coil, a conventional eddy current coil, or a gmr (see column 4, lines 12-18 of Nath).

With regard to lines 1-4 and 6-9 of paragraph 1 of page 8 of the Remarks, the Examiner respectfully disagrees and directs applicant's attention to the above response.

With regard to paragraph 2 of page 8 of the Remarks, the Examiner notes that Cila was not applied to provide motivation to combine Behrens and Nath.

With regard to paragraph 3 of page 8 of the Remarks, the Examiner respectfully disagrees and directs applicant's attention to the above first two paragraphs of this response.

With regard to the second full paragraph of page 10 of the Remarks, the Examiner respectfully disagrees and directs applicant's attention to the above first two paragraphs of this response.

With regard to the last full paragraph of page 10 of the Remarks, the Examiner notes that Takizawa was not applied to provide motivation to combine Behrens and Nath.

With regard to paragraph 1 of page 11 of the Remarks, the Examiner respectfully disagrees and directs applicant's attention to the above first two paragraphs of this response.

With regard to paragraph 1 of page 13 of the Remarks, the Examiner respectfully disagrees and directs applicant's attention to the above first two paragraphs of this response.

With regard to paragraph 2 of page 13 of the Remarks, the Examiner notes that Stolfus was not applied to provide a motivation to combine Behrens and Nath.

With regard to paragraph 1 of page 14 of the Remarks, the Examiner respectfully disagrees and directs applicant's attention to the above first two paragraphs of this response.

With regard to paragraph 2 of page 14 of the Remarks, the Examiner notes that Cila and Stolfus were not applied to provide motivation to combine Behrens and Nath.

With regard to paragraphs 3 and 4 of page 14 of the Remarks, the Examiner respectfully disagrees and directs applicant's attention to the above first two paragraphs of this response.

With regard to the second full paragraph of page 15 of the Remarks, the Examiner respectfully disagrees and directs applicant's attention to the above first two paragraphs of this response.

With regard to the third full paragraph of page 15 of the Remarks, the Examiner notes that Takizawa and Stolfus were not applied to provide motivation to combine Behrens and Nath.

With regard to the fourth full paragraph of page 15 of the Remarks, the Examiner respectfully disagrees and directs applicant's attention to the above first two paragraphs of this response.

With regard to the second and third full paragraphs of page 17 of the Remarks, the Examiner respectfully disagrees and directs applicant's attention to the above first two paragraphs of this response.

With regard to paragraph 2 of page 18 of the Remarks, the Examiner respectfully disagrees and directs applicant's attention to both the above first two paragraphs as well as the rejection of claim 14 of the Final Rejection mailed 5/18/2006.

With regard to lines 1-6 of the first full paragraph of page 19, the Examiner respectfully disagrees and directs applicant's attention to the above first two paragraphs of this response.

With regard to the second full paragraph of page 19 of the Remarks, the Examiner respectfully disagrees and directs applicant's attention to the above first two paragraphs of this response.

With regard to the last two lines of page 19, as well as lines 1-2 of page 20 of the Remarks, the Examiner respectfully disagrees and directs applicant's attention to both the above first two paragraphs of this response as well as the rejections of claims 14 and 24 of the Final Rejection mailed 5/18/2006.

With regard to the last paragraph of page 20 of the Remarks, the Examiner respectfully disagrees and directs applicant's attention to both the above first two paragraphs as well as the rejection of claim 14 of the Final Rejection mailed 5/18/2006.

With regard to paragraph 2 of page 21 of the Remarks, the Examiner respectfully disagrees and directs applicant's attention to both the above first two paragraphs as well as the rejections of claims 14 and 19-22 of the Final Rejection mailed 5/18/2006.

With regard to the first, second, and third full paragraphs of page 22 of the Remarks, as well as pages 23, 24, and 25, the Examiner respectfully disagrees. The Examiner notes that similarities of the applicant's Figure 9 in comparison to that of Figure 5 of Stolfus. Stolfus appears to disclose, at the least, reducing the pulse rate (see Abstract / note that the output of the vehicle speed sensor circuit can be divided). The Examiner notes that given the similarities between applicant's Figure 9 in comparison to that of Figure 5 of Stolfus, that in the combination, whatever applicant's invention is capable of, the combination of Behrens in view of Nath and Stolfus is capable of performing the same. Also note the similarities of what Behrens in view of Nath teach with regard to applicant's invention (see the above first two paragraphs of this response, as well as the rejections of claims 1 and 14 of the Final Rejection mailed 5/18/2006). Therefore, having taught the combination of Behrens in view of Nath and Stolfus, the invention of Behrens in view of Nath and Stolfus must be able to perform the same function as applicant's invention, including reducing the pulse rate so as to provide a consistent pulse rate regardless of the number of fins of the non-ferromagnetic compressor wheel. Therefore, the Examiner respectfully disagrees with applicant.

With regard to the third full paragraph of page 26 of the Remarks, the Examiner respectfully disagrees and directs applicant's attention to the paragraph immediately above.

With regard to the third paragraph of page 28, the Examiner respectfully disagrees and directs applicant's attention to the response located two paragraphs above.